A Complete Editorial Index of

WORLD PETROLEUM

Volume 40, Published in 1969

25 West 45th Street, New York, N.Y. 10036

AUTHOR'S INDEX

	Issue	Page
ABBOTT, J.A.		
A Management Information and Control System	Dec	22
BARTOLOTTA, GIUSEPPE		
Skyrocketing Demand Spurs Rapid Progress In Italy's Oil Technology	July	48
BENARD, ANDRE		
France's Multi-National Companies	Oct	36
BLAND, WILLIAM F.		
Petrochemical Market Growth Discussed in Wiesbaden	Dec	34
BOYLE, R. R.		
Gas Turbine Application For Offshore Exploration	June	26
BRAUN, W. M.		
Novel Oil Tank System Is Designed To Meet New Needs	Apr	32
BRUCE, P.		
Floating Breakwater Aids Drill Ship In Rough Seas	June	46
CHATFIELD, J. C.		
Industry Profitability Remains Unchanged	July	29
CHON, M. S.		
Korea's Petroleum Outlook	Nov	30
de LAVILLEON, PATRICK		
Crude Self Sufficiency Attainable For ENI	July	40
ENI Plays Major Role in Arab Oil Developments	July	56
ERAP Seeks To Increase Stake In South European Pipe Line	August 1,	25
Italy's Energy Demand Soars	July	38
What Next For Sonatrach?	Mar	22
EATON, ROBERT		
Nuclear Radiation Techniques In Oil Well Logging	Oct	54
EDMONDSON, RUTH		
Alaskan Oil Lease Sale Biggest in History	Nov	22
Land Lease Sale Is Next Big Step At North Slope	Sept	28
El AYOUTY, MUSTAFA K.		
Egypt's Oil Prospects Today	June	36
FRASER, IAN		
Gulf Stream Drift Mission	Dec	66
GIBSON, RAY		
Non-Toxic Dispersant Combats Oil Spills	Apr	44
USA Events To Have World-Wide Impact	Jan	28
World Demand May Reach 41 Million B/D In 1969	Jan	20
GILLES, AUDY		
Rapid Growth Ahead For Sea Transport of Natural Gas	Aug 1,	26
GUILLAMAT, PIERRE		
ERAP And French Oil Policy	Oct	43
HAGEMANN, ERHARD		
German Refinery Expansion Slower	June	24
Germans Look To Salt Domes To Ease Oil Storage Problems	June	26
Germany Weighs Soviet Crude Offer	Aug 1,	34
HAGUE, BRIAN C.		
Chevron More Than Doubles Capacity At Rotterdam	Oct	46
Efficiency Is Key To Huge Distribution Terminal	Aug 15,	50
Singapore Leads Southeast Asia Refinery Expansion	Dec	00
Single-Buoy Moorings Can Help Handle The New Mammoth Tankers (Part I)	Nov	26
Single Buoy Moorings Can Help Handle The New Mammoth Tankers (Part II)	Dec	56
HAYES, J. C.		
New Platforming Catalyst Found Exceptional	Jan	22
HELLER, CHARLES A.		
American Petroleum Fortress?	June	32
Oil At The United Nations—1968	Mar	38
The Strait of Hormuz—Critical In Oil's Future	Oct	24
ISHII, MASAYA		
Petrochemicals Take The Lead In Japanese Oil Industry	Aug 15,	34
JABOLI, DANTE		
The Oil and Gas Search In Offshore Italy	July	58
KNOWLES, RUTH SHELDON		
Canadian Arctic Again Attracts Oil Hunters	Jan	24
KURAISHI, MINORU		
Redesigned Power Cables Installed At Khafji Field	Feb	42
La MOTTE, CLYDE		
Industry in USA Facing Many Critics in Washington	Aug 15,	52
LICKUS, A. G.		
New Platforming Catalyst Found Exceptional	Jan	32
McKNIGHT, C. G., Jr.		
Why Not Use More Aluminum	Nov	32
MADDALONI, MARIO		
Colombian Wax and Lubes Plant A Worldwide Coordination Effort	Aug 15,	36
MILLER, A. G.		
Marine Automation Is Here Now	Apr	24
MILLER, E. C.		
Computerized Process Control Can Prove Profitable	Sept	40
MOSTOFI, BAGHIR		
The Petrochemical Resources And Potential Of The Persian Gulf	Aug 15,	42
RAMETTE, LOUIS		
Offshore Technology By CFP Covers All Major Problems	Oct	27
SALIMBENI, FRANCESCO		
Better Techniques Aid Pipeline Construction Now	Apr	40
SCOTT, C.		
How Amoco Controls Gas Flow At Leman	Aug 1,	28
SHEETS, RALPH W.		
How A Task Force Planned A 10-Year Refining Growth	Feb	31
SHERWOOD, PETER W.		
Advances In The Production Of Phthalate Esters	June	54
SJOUKE, JOHN		
Device Buffers Heaving Problems on Drillships	Nov	49
STERBA, M. J.		
New Platforming Catalyst Found Exceptional	Jan	32
TAHER, ABDULHADY HASSAN		
National And International Oil Companies and Participation	Feb	44
TODD, WILLIAM F.		
The Impact Of Oil On Middle East Economies	Jan	38
UHL, WILLIAM C.		
Alaska's North Slope Activity Gains Momentum	Feb	38
Crude Capacity To Reach Nearly 55 Million b/d By 1972	Aug 15,	30
Processing Review: Jan p. 14, Feb p. 48, Mar p. 42, Apr p. 14, May p. 14, June p. 14, Jul p. 16, Aug 1, p. 10, Sept p. 56, Oct p. 68, Nov p. 12, Dec p. 10		
VAN GEUNS, J. P.		
Gurreh: World's Largest Crude Pumping Station	Aug 1,	32
WEINERT, P. C.		
New Platforming Catalyst Found Exceptional	Jan	32
WELLS, MICHAEL J.		
Amoco Group Starts Leman North Sea Gas Production	June	22
Crude Production Still Jumping In Libya	Mar	26
Drilling and Production Review	Aug 1,	39
Dubai—the Middle East's Newest Oil Producing State	July	26
Dutch Start Onshore Development But Mark Time Offshore	Nov	52
Egypt Makes Up For Sinai Loss But Seeks New Strikes	Mar	16
El Alamein Oil Field Comes Into Production	Mar	33
Exploration/Production Review	Feb	44
Iran Expands Fields, Terminals As Demands Rise for More Revenue	July	32
Many Lessons Being Learned From Drilling In The Arctic	Sept	30
Sarir Expands Again	Apr	22
Sassan Field Now Operating	Feb	28
Saudi Arabia Ready For Giant Tanker Era	Aug 1,	22
Where The Action Is (Part I)	Sept	26
Where The Action Is (Part II)	Nov	43
WHERRY, T. C.		
Computerized Process Control Can Prove Profitable	Sept	40

SUBJECT INDEX

ASSOCIATIONS
- Algeria Joins OPEC; Price postings At Issue ..... Aug 1, 14
- Program Developed for Eighth World Petroleum Congress ..... Sept 54

AUTOMATION
- A Management Information And Control System ..... Dec 22
- Computerized Process Control Can Prove Profitable ..... Sept 40

AUTOMOTIVE

Automotive Developments In The Eastern Hemisphere, Jan 16H, Feb 16, Mar 12C, Apr 16F

EXPLORATION

- Confrontations Destroy (Editorial) Mar 15
- From Research To Search (Editorial) Oct 23
- Maruzen Oil May Join Alaska Search ..... Mar 12D
- Schlumberger Transmits Log Via Satellite ..... Feb 15
- Where the Action Is (Part I) ..... Sept 26
- Where The Action Is (Part II) ..... Nov 43

CONCESSIONS
- Alaska's Oil Lease Sale Biggest In History ..... Nov 22
- Conoco Has Contract Type Concession In Eastern Iran ..... June 16E
- Egypt Makes Up For Sinai Loss But Seeks New Strikes ..... Mar 16
- Egypt's Oil Prospects Today ..... June 36
- ERAP And ENI Head European Consortium To Explore In Iran ..... June 16G
- Land Lease Sale Is Next Big Step At North Slope ..... Sept 28
- Offshore Drilling Underway Now In South African Waters ..... Jan 16A
- West Germany Wins North Sea Court Ruling ..... Apr 16D

DRILLING
- Alaska's North Slope Activity Gains Momentum ..... Feb 38
- Amoco Group Starts Leman North Sea Gas Production ..... June 22
- Canadian Arctic Again Attracts Oil Hunters ..... Jan 24
- Crude Self Sufficiency Attainable For ENI ..... July 40
- Device Buffers Heaving Problems on Drillships ..... Nov 49
- Egypt Makes Up For Sinai Loss But Seeks New Strikes ..... Mar 16
- Egypt's Oil Prospects Today ..... June 36
- El Alamein Oil Field Comes Into Production ..... Mar 23
- Exploration/Production Review Feb 50; Aug 1,39
- Fifteen Rigs Are Active On Alaska's North Slope ..... June 32
- Floating Breakwater Aids Drill Ship In Rough Seas ..... June 46
- Gidgealpa, Moomba Gas Fields Readied For Production ..... Jan 16A
- Gulf Starts Drilling In Irish Sea ..... Sept 14
- Offshore Technology By CFP Covers All Major Problems ..... Oct 27
- Post Mohole Research Aids Deep Sea Drilling Program ..... June 16E
- Saudi Arabia Ready For Giant Tanker Era ..... Aug 1, 22
- Spanish Exploration Picks Up Speed ..... Aug 1, 15

Issue Page

The Oil And Gas Search In Offshore Italy ..... July 58
USA Events To Have World-Wide Impact ..... Jan 28
What Next For Sonatrach? ..... Mar 22
World Rotary Rig Activity: Jan 50, Feb 56, Mar 48, Apr 68

EQUIPMENT
Device Buffers Heaving Problems On Drillships ..... Nov. 49
Diving System Good For 600 Ft .... Dec 52
Gas Turbine Application For Offshore Exploration ..... June 26
Many Lessons Learned From Drilling In The Arctic ..... Sept 30

GEOPHYSICS
From Research to Search (Editorial) Oct 23
New Tools For the Geophysicist—1969 ..... Oct 62
Nuclear Radiation Techniques In Oil Well Logging ..... Oct 54
Schlumberger Transmits Log Via Satellite ..... Feb 15

MAPS
Alaska's Oil Lease Sale Biggest In History ..... Nov 22
Canadian Arctic Again Attracts Oil Hunters ..... Jan 24
Fifteen Rigs Are Active on Alaska's North Slope ..... June 32
Egypt's Oil Prospects Today ..... June 36
Gulf Starts Drilling In Irish Sea ... Sept 14
Offshore Drilling Underway Now In South African Waters ..... Jan 16 A
Saudi Arabia Ready For Giant Tanker Era ..... Aug 1, 22

OFFSHORE
Alaskan Oil Discovery Reshapes Canadian Exploration Patterns ..... Jan 22
Amoco Group Starts Leman North Sea Gas Production ..... June 22
Canadian Arctic Again Attracts Oil Hunters ..... Jan 24
Device Buffers Heaving Problems On Drillships ..... Nov 48
Diving System Good For 600 Ft .... Dec 52
Drilling and Production ..... Aug 1, 39
Dutch Start Onshore Development But Mark Time Offshore ..... Nov 52
Europe and North Africa Search Reviewed At Brighton Meeting .... Nov. 60
First Good Oil Test Reported By Amoco/Gas Council Group ..... Dec 12B
Floating Breakwater Aids Drill Ship In Rough Seas ..... June 46
Gas Turbine Application For Offshore Exploration ..... June 26
Gulf Starts Drilling In Irish Sea .... Sept 14
Gulf Stream Drift Mission ..... Dec 66
Offshore Drilling Underway Now In South African Waters ..... Jan 16A
Offshore Technology By CFP Covers All Major Problems ..... Oct 27
Oil And Water Problems (Editorial) June 21

STATISTICS
ERAP And French Oil Policy ..... Oct 43
Europe and North Africa Search Reviewed At Brighton Meeting .... Nov 60
Soviet Drilling Costs Up As Technology Lags Behind ..... July 20A
Where The Action Is ..... Sept 26

LEGISLATION

Confrontations Destroy (Editorial) Mar 15
Industry in USA Facing Many Critics in Washington ..... Aug 15, 52
Libya Issues New Oil Regulations .. Mar 29
Gas Council Subsidiary Becomes UK State Oil Firm ..... Oct 14
Restrictive Oil Legislation Pending On North Sea In UK ..... June 16C
Spanish Exploration Picks Up Speed ..... Aug 1, 15
West Germany Wins North Sea Court Ruling ..... Apr 16D

MARKETING

Algeria Joins OPEC; Price Postings At Issue ..... Aug 1, 14
EEC Ministers Study Newest Common Report ..... Mar 12B
Eni Plays Major Role In Arab Oil Developments ..... July 56
Germany Weighs Soviet Crude Offer ..... Aug 1, 34

Issue Page

Large Flow of Algerian Gas to USA Will Begin in 1973 ..... Sept. 13
What Does BP's Break Into The USA Markets Mean? ..... Apr 16C
What Next For Sonatrach? ..... Mar 22
Why A New Oil Supply Company For Germany? ..... June 28
Wintershall Has Merged, Will CBAG Be Next? ..... Mar 12A
Free World Demand Rising 7.3% .. Sept 36
USA Demand Forecast To Rise 3.2% In 1969 ..... Jan 36
World Demand May Reach 41 Million B/D In 1969 ..... Jan 20

IMPORTS & EXPORTS
Algerian Gas ..... Sept 13
American Petroleum Fortress? .... June 32
Egypt Makes Up For Sinai Loss But Seeks New Strikes ..... Mar 16
Libyan Gas Export At Final Stages . Mar 20
Skyrocketing Demands Spurs Rapid Progress In Italy's Oil Technology .. July 48
The Strait Of Hormuz—Critical In Oil's Future ..... Oct 24
Words of Wisdom (Editorial) ..... Feb 25

LEGISLATION
ERAP And French Oil Policy ..... Oct 43

MAPS
The Strait Of Hormuz—Critical In Oil's Future ..... Oct 24

NATURAL GAS

Large Flow of Algerian Gas to USA Will Begin in 1973 ..... Sept 13
Amoco Group Starts Leman North Sea Gas Production ..... June 22
Brunei Liquefied Gas For Japan Dec 12C
Crude Self Sufficiency Attainable For ENI ..... July 40
Gas Council Subsidiary Becomes UK State Oil Firm ..... Oct 14
Gidgealpa, Moomba Gas Fields Readied For Production ..... Jan 16A
How Amoco Controls Gas Flow At Leman ..... Aug 1, 28
Japanese Plan To Import Liquefied Gas From Abu Dhabi ..... Mar 12D
Libya Gas Export At Final Stages .. Mar 20
Libya-to-Europe LNG Flow Starts From Plant At Brega ..... Feb 11
More Gas Coming In Germany .... June 22
More Natural Gas For France ..... Apr 16E
Potential Gas Supply In USA Estimated at 1,227 Cubic Feet ..... Aug 1, 16
Problems Beset "Typical" Gas Pipeline In Soviet Far North ..... June 16H
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26
Shell/Esso And Amoco Groups Sign North Sea Contracts ..... Feb 13
Skyrocketing Demand Spurs Rapid Progress In Italy's Oil Technology .. July 48
The Gas Industry In France ..... Oct 30
The Oil And Gas Search In Offshore Italy ..... July 58

PETROCHEMICALS

Advances In The Production Of Phthalate Esters ..... June 54
The World's Petrochemical Plants Aug 15, 84

PLANTS DESCRIBED
Britain's First Big Petrochemical Refinery Is Given Go-Ahead .... Nov 16A
Huge Ammonia Facility Heralds Esso Expansion In Holland ..... Oct 13

PROCESSES
East German Paraffin Process Utilizes Molecular Sieves ..... Dec 42

STATISTICS
Crude Capacity To Reach Nearly 55 Million B/D by 1972 ..... Aug 15, 30
German Refinery Expansion Slower, June 24
Korea Plans Petrochemical Growth Nov 16C
Petrochemical Market Growth Discussed In Wiesbaden ..... Dec 34
Petrochemicals Take The Lead In Japanese Oil Industry ..... Aug 15, 34
Singapore Leads Southeast Asia Refinery Expansion ..... Dec 18
Soviet Bloc Progress In Refining/Petrochemicals ..... Aug 15, 33
Spain's Process Plant Construction Moves Rapidly ..... Jan 16E
The Petrochemical Resources And Potential Of The Persian Gulf .. Aug 15, 42

Issue Page

PROCESSING

A Management Information And Control System ..... Dec 22
ENI Plays Major Role In Arab Oil Developments ..... July 56
German Refinery Expansion Slower June 24
How A Task Force Planned A 10-Year Refining Growth ..... Feb 31
New Platforming Catalyst Found Exceptional ..... Jan 32
New Proposal For Greek Refinery Raises Crude Needs ..... Feb 11
Power-Gas Expects Loss On A British Refinery Job ..... Dec 12B
The State Of Processing (Editorial) ..... Aug 15, 29
The World's Processing Plants 1969 ..... Aug 15, 62
Used Lube Oil A Problem In West Germany ..... Jan 16F
What Next For Sonatrach? ..... Mar 22

EQUIPMENT
Computerized Process Control Can Prove Profitable ..... Sept 40

PLANTS DESCRIBED
Big Lube Oil Complex Helps UK Balance Of Payments ..... Sept 15
Chevron More Than Doubles Capacity At Rotterdam ..... Oct 46
Colombian Wax and Lubes Plant A Worldwide Coordination Effort .. Aug 15, 36
Green Light For Cyprus Refinery .Dec 12A

STATISTICS
Crude Capacity To Reach Nearly 55 Million B/D By 1972 ..... Aug 15, 30
French Make Pitch For Next Spanish Refinery ..... June 32
Korea's Petroleum Outlook ..... Nov 30
Petrochemicals Take The Lead In Japanese Oil Industry ..... Aug 15, 34
Record British Loan Enables Petrobras to Spend $82 Million ..... Sept 13
Singapore Leads Southeast Asia Refinery Expansion ..... Dec 18
Soviet Bloc Progress In Refining/Petrochemicals ..... Aug 15, 33
Spain's Process Plant Construction Moves Rapidly ..... Jan 16E

PRODUCTION

Amoco Group Starts Leman Field North Sea Gas Production ..... June 22
Crude Self Sufficiency Attainable For ENI ..... July 40
Dubai—The Middle East's Newest Oil Producing State ..... July 26
Dutch Start Onshore Development But Mark Time Offshore ..... Nov 52
Egypt Makes Up For Sinai Loss But Seeks New Strikes ..... Mar 16
Gurreh: World's Largest Crude Pumping Station ..... Aug 1, 32
Hewett North Sea Gas Field Is Aimed At June Start-Up ..... June 16E
Italy's Energy Demand Soars ..... July 38
More Gas Coming In Germany .... June 22
Sarir Expands Again ..... Apr 22
Saudi Arabia Ready For Giant Tanker Era ..... Aug 1, 22
World Crude Production: Jan 50, Feb 56, Mar 48, June 55, July 65, Aug 1, 44, Sept 73, Oct 70, Nov 73, Dec 74

OFFSHORE
Redesigned Power Cables Installed At Khafji Field ..... Feb 42
Sassan Field Now Operating ..... Feb 28
Startup At Iran's Rostam Offshore Field Underway ..... Oct 16

RESERVES & STATISTICS
Crude Production Still Jumping In Libya ..... Mar 26
El Alemein Oil Field Comes Into Production ..... Mar 33
Field Expansion In Kuwait Follows New Port Facilities ..... June 16A
Industry Silence Hides Dropping Of Crude Production In Nigeria ..... Nov 16A
Iran Expands Fields, Terminals As Demands Rise For More Revenues .. July 32
Occidental Pushes Ahead With Oil And Water In Libya ..... July 20C
Soviet Lowers Crude Goal ..... Jan 16E
USA Events To Have World-Wide Impact ..... Jan 28
USA Demand Forecast To Rise 3.2% In 1969 ..... Jan 36
What Next For Sonatrach? ..... Mar 22

Issue Page

TRAINING

Kuwait National Petroleum Starts Program To Train Nationals ..... Sept 52

TRANSPORTATION

MAPS
Field Expansion In Kuwait Follows New Port Facilities ..... June 16A
New Export Outlet Being Built For Shell-BP Nigerian Oil ..... Jan 16G

PIPELINES
Alaska's North Slope Activity Gains Momentum ..... Feb 38
Better Techniques Aid Pipeline Construction Now ..... Apr 40
ERAP Seeks To Increase Stake In South European Pipe Line ..... Aug 1, 25
Gulf's Own Proposal May Force Libya's Western Pipeline Issue ..... Oct 15
Gurreh: World's Largest Crude Pumping Station ..... Aug 1, 32
How Amoco Controls Gas Flow At Leman ..... Aug 1, 28
Iran Expands Fields, Terminals As Demands Rise For More Revenue ... July 32
Italians Preparing Methods For Deepwater Pipelaying ..... Apr 16D
New Export Outlet Being Built For Shell-BP Nigerian Oil ..... Jan 16G
Oxylibya Readies For 1-Million b/d Output ..... Feb 14
Problems Beset "Typical" Gas Pipeline In Soviet Far North ..... June 16H
Redesigned Power Cables Installed At Khafji Field ..... Feb 42
Russia Weighs Czech Use Of Yugoslav Crude Line ..... Jan 16B
Sassan Field Now Operating ..... Feb 28
The World's Pipelines 1969 ..... Apr 58

TANKERS & TERMINALS
Amoco Group Start Leman North Sea Gas Production ..... June 22
Efficiency Is Key To Huge New Distribution Terminal ..... Sept 50
Egypt Makes Up For Sinai Loss But Seeks New Strikes ..... Mar 16
Field Expansion In Kuwait Follows New Port Facilities ..... June 16A
Germans Look To Salt Domes To Ease Oil Storage Problems ..... June 26
Gothenburg—An Important Oil Harbor For Europe ..... June 48
Libyan Gas Export At Final Stage .. Mar 20
Libya-to-Europe LNG Flow Starts From Plant At Brega ..... Feb 11
New Terminals Planned For Kharg Nov 16B
Non-Toxic Dispersant Combats Oil Spills ..... Apr 44
Oxylibya Readies For 1-Million b/d Output ..... Feb 14
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26
Redesigned Power Cables Installed At Khafji Field ..... Feb 42
Sarir Expands Again ..... Apr 22
Sassan Field Now Operating ..... Feb 28
Saudi Arabia Ready For Giant Tanker Era ..... Aug 1, 22
Single Buoy Moorings Can Help Handle The New Mammoth Tankers (Part I) Nov 26
Single Buoy Moorings Can Help Handle The New Mammoth Tankers (Part II) Dec 56
Tanker Economics Today (Editorial) Jan 19
Tanker Gets Strength Test ..... Dec 64
Tankers Grow—But What Of German Ports? ..... Nov 16C
What Tanker Size Is Best? (Editorial) ..... Aug 1, 21

GEOGRAPHICAL INDEX

AFRICA

ENI Plays Major Role In Arab Oil Developments ..... July 56
Where The Action Is (Part II) .... Nov 43

ALGERIA
Algeria Joins OPEC; Price Postings At Issue ..... Aug 1, 14
Algeria Makes Diplomatic Moves Toward USA Oil And Gas ..... Jan 16C
European Firms Multiply Joint Search Ventures ..... Aug 1, 13
Franco-Algerian Oil Accord Is To Be Overhauled ..... June 16B
Large Flow of Algerian Gas to USA Will Begin in 1973 ..... Sept 13
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26
What Next For Sonatrach? ..... Mar 22

CONGO
European Firms Multiply Joint Search Venture ..... Aug 1, 13

EGYPT
Egypt's Oil Prospects Today ..... June 36
El Alamein Oil Field Comes Into Production ..... Mar 33

GABON
European Firms Multiply Joint Search Ventures ..... Aug 1, 13

IVORY COAST
European Firms Multiply Joint Search Ventures ..... Aug 1, 13

LIBYA
Crude Production Still Jumping In Libya ..... Mar 26
Gulf's Own Proposal May Force Libya's Western Pipeline Issue ..... Oct 15
Libya Gas Export At Final Stages .. Mar 20
Libya Issues New Oil Regulations ... Mar 29
Libya-to-Europe LNG Flow Starts From Plant At Brega ..... Feb 11
Occidental Pushes Ahead With Oil And Water In Libya ..... July 20C
Oxylibya Readies For 1-Million B/D Output ..... Feb 14
Sarir Expands Again ..... Apr 21

NIGERIA
Industry Silence Hides Dropping Of Crude Production In Nigeria ..... Nov 16A
New Export Outlet being Built For Shell-BP Nigerian Oil ..... Jan 16G

SOUTH AFRICA
Offshore Drilling Underway Now In South African Waters ..... Jan 16A

ASIA AND THE FAR EAST

Where The Action Is (Part II) ..... Nov 43

AUSTRALIA:
Gidgealpa, Moomba Gas Fields Readied For Production ..... Jan 16A

BRUNEI
Brunei Liquefied Gas For Japan .. Dec 12C

JAPAN
Brunei Liquefied Gas For Japan . Dec 12C
Japanese Plan Almost Half Million b/d In Desulfurization ..... Feb 12
Japanese Plan To Import Liquefied Gas From Abu Dhabi ..... Mar 12D

KOREA (South)
Korea's Petroleum Outlook ..... Nov 30
Korea Plans Petrochemical Growth Nov 16C

SINGAPORE
Singapore Leads Southeast Asia Refinery Expansion ..... Dec 18

EUROPE

EEC Ministers Study Newest Common Energy ..... Mar 12B
ERAP And ENI Head European Consortium To Explore In Iran .. June 16G
Petrochemical Market Growth Discussed in Wiesbaden ..... Dec 34
Where The Action Is (Part I) ..... Sept 26

BELGIUM
European Firms Multiply Joint Search Ventures ..... Aug 1, 13

CYPRUS
Green Light For Cyprus Refinery . Dec 12A

FRANCE
ERAP And French Oil Policy ..... Oct. 43
ERAP Seeks To Increase Stake In South European Pipe Line ..... Aug 1, 25
European Firms Multiply Joint Search Ventures ..... Aug 1, 13
France's Multi-National Companies .. Oct 36
Franco-Algerian Oil Accord Is To Be Overhauled ..... June 16B
French Make Pitch For Next Spanish Refinery ..... June 32
More Natural Gas For France ..... Apr 16E
Offshore Technology By CFP Covers All Major Problems ..... Oct 27
Oil, Arms Reportedly Key Areas of Franco-Kuwaiti Cooperation ..... July 20B
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26
The Gas Industry In France ..... Oct 30

GERMANY (West)
European Firms Multiply Joint Search Ventures ..... Aug 1, 13
German Refinery Expansion Slower June 24
Germans Look To Salt Domes To Ease Oil Storage Problems ..... June 26
Germany Weighs Soviet Crude Offer ..... Aug 1, 34
It's An All-Clear Signal For Germany's Gelsenberg ..... June 16D
More Gas Coming In Germany .... June 22
Tankers Grow—But What Of German Ports? ..... Nov 16C
Used Lube Oil A Problem In West Germany ..... Jan 16F
West Germany Wins North Sea Court Ruling ..... Apr 16D
Why A New Oil Supply Company For Germany ..... June 28
Wintershall Has Merged, Will GBAG Be Next? ..... Mar 12A

GREECE
New Proposal For Greek Refinery Raises Crude Needs ..... Feb 11

ITALY
Crude Self Sufficiency Attainable For ENI ..... July 40
ENI Plays Major Role In Arab Oil Developments ..... July 56
ERAP Seeks To Increase Stake In South European Pipe Line ..... Aug 1, 25
European Firms Multiply Joint Search Ventures ..... Aug 1, 13
Italians Preparing Methods For Deepwater Pipelaying ..... Apr 16D
Italy's Energy Demand Soars ..... July 38
Libya-to-Europe LNG Flow Starts From Plant At Brega ..... Feb 11
Skyrocketing Demand Spurs Rapid Progress In Italy's Oil Technology .. July 48
The Oil and Gas Search In Offshore Italy ..... July 58

NETHERLANDS
Chevron More Than Doubles Capacity At Rotterdam ..... Oct 46
Dutch Start Onshore Development But Mark Time Offshore ..... Nov 52
Huge Ammonia Facility Heralds Esso Expansion In Holland ..... Oct 13

NORTH SEA
Amoco Group Starts Leman North Sea Gas Production ..... June 22
Dutch Start OnShore Development But Mark Time Offshore ..... Nov 52
First Good Oil Test Reported by Amoco/Gas Council Group ..... Dec 12B
Hewett North Sea Gas Field Is Aimed At June Start-Up ..... June 16E
How Amoco Controls Gas Flow At Leman ..... Aug 1, 28
Restrictive Oil Legislation Pending On North Sea In UK ..... June 16C
Shell/Esso And Amoco Groups Sign North Sea Gas Contracts ..... Feb 13
West Germany Wins North Sea Court Ruling ..... Apr 16D

SPAIN
French Make Pitch For Next Spanish Refinery ..... June 32
Spanish Exploration Picks Up Speed ..... Aug 1, 15
Spain's Process Plant Construction Moves Rapidly ..... Jan 16E

SWEDEN
Gothenburg—An Important Oil Harbor For Europe ..... June 48
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26
Tanker Gets Strength Test ..... Dec 64

UNITED KINGDOM
A Management Information and Control System ..... Dec 22
Amoco Group Starts Leman North Sea Gas Production ..... June 22
Big Lube Oil Complex Helps UK Balance Of Payments ..... Sept 15
Britain's First Big Petrochemical Refinery Is Given Go-Ahead ..... Nov 16A
Efficiency Is Key To Huge New Distribution Terminal ..... Sept 50
First Good Oil Test Reported by Amoco/Gas Council Group ..... Dec 12B
Gas Council Subsidiary Becomes UK State Oil Firm ..... Oct 14
Gulf Starts Drilling In Irish Sea .... Sept 14
Hewett North Sea Gas Field Is Aimed At June Start-Up ..... June 16E
Power-Gas Expects Loss On A British Refinery Job ..... Dec 12B
Rapid Growth Ahead For Sea Transport Of Natural Gas ..... Aug 1, 26

Issue Page

Record British Loan Enables Petrobras to Spend $82 Million ..... Sept 13
Restrictive Oil Legislation Pending On North Sea In UK ..... June 16C
UK Presses For Government Participation ..... Dec 12A
GERMANY (West)
ERAP Seeks To Increase Stake In South European Pipe Line ..... Aug 1, 26

LATIN AMERICA

BRAZIL
Record British Loan Enables Petrobras to Spend -82 Million ..... Sept 13
COLOMBIA
Colombian Wax And Lubes Plant A Worldwide Coordination Effort .. Aug 15, 36

MIDDLE EAST

ENI Plays Major Role In Arab Oil Developments ..... July 56
ERAP And ENI Head European Consortium To Explore In Iran .. June 16G
The Petrochemical Resources And Potential Of The Persian Gulf ..... Sept 42
The Strait Of Hormuz—Critical In Oil's Future ..... Oct 24
Where The Action Is (Part I) ..... Sept 26
ABU DHABI
Japanese Plan To Import Liquefied Gas From Abu Dhabi ..... Mar 12D
Offshore Technology By CFP Covers All Major Problems ..... Oct 27
BAHRAIN
The Impact Of Oil On Middle East Economies ..... Jan 38
DUBAI
Dubai—The Middle East's Newest Oil Producing State ..... July 26
IRAN
Agreement Reached In Iranian Demands—For Another Year ..... July 20A
Conoco Has Contract Type Concession In Eastern Iran ..... June 16E
European Firms Multiply Joint Search Ventures ..... Aug 1, 13
Gurreh: World's Largest Crude Pumping Station ..... Aug 1, 32
Iran Expands Fields, Terminals As Demands Rise For More Revenue .. July 32
New Terminals Planned for Kharg Nov 16B
Sassan Field Now Operating ..... Feb 28
Startup At Iran's Rostam Offshore Field Underway ..... Oct 16
The Impact Of Oil On Middle East Economies ..... Jan 38
IRAQ
The Impact Of Oil On Middle East Economies ..... Jan 38
KUWAIT
Field Expansion In Kuwait Follows New Port Facilities ..... June 16A
Kuwait National Petroleum Starts Program To Train Nationals ..... Sept 52
Oil, Arms Reportedly Key Areas of Franco-Kuwaiti Cooperation ..... July 20B
The Impact Of Oil On Middle East Economies ..... Jan 38
OMAN
The Impact Of Oil On Middle East Economies ..... Jan 38
QATAR
The Impact Of Oil On Middle East Economies ..... Jan 38
SAUDI ARABIA
National And International Oil Companies And Participation ..... Feb 44
Saudi Arabia Ready For Giant Tanker Era ..... Aug 1, 22
The Impact Of Oil On Middle East Economics ..... Jan 38
TRUCIAL COAST
Success or Failure on Trucial Coast Dec 12D

NORTH AMERICA

Issue Page

CANADA
Alaskan Oil Discovery Reshapes Canadian Exploration Patterns ..... Jan 22
American Petroleum Fortress? ..... June 32
Canadian Arctic Again Attracts Oil Hunters ..... Jan 24
USA
Alaskan Oil Discovery Reshapes Canadian Exploration Patterns ..... Jan 22

Issue Page

Alaska's North Slope Activity Gains Momentum ..... Feb 38
Alaska's Oil Lease Sale Biggest In History ..... Nov 22
American Petroleum Fortress? ..... June 32
Fifteen Rigs Are Active On Alaska's North Slope ..... June 32
Gulf Stream Drift Mission ..... Dec 66
Industry in USA Facing Many Critics In Washington ..... Aug 15, 52
Land Lease Sale Is Next Big Step At North Slope ..... Sept 28
Large Flow of Algerian Gas to USA Will Begin in 1973 ..... Sept 13
Many Lessons Being Learned From Drilling In The Arctic ..... Sept 30
Maruzen Oil May Join Alaskan Search ..... Mar 12D
Not How But How Soon? (Editorial) ..... Nov 21
USA Demand Forecast To Rise 3.2% In 1969 ..... Jan 36
USA Events To Have World-Wide Impact ..... Jan 28
What Does BP's Break Into The USA Markets Mean? ..... Apr 16C
Which Hemisphere (Editorial) ..... July 25

UNITED NATIONS

The UN And Energy Problems (Editorial) ..... Apr 21

USSR & BLOC

BULGARIA
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
CZECHOSLOVAKIA
Russia Weighs Czech Use Of Yugoslav Crude Line ..... Jan 16B
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
GERMANY (EAST)
East German Paraffin Process Utilizes Molecular Sieves ..... Dec 42
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33

Issue Page

HUNGARY
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
POLAND
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
ROMANIA
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
USSR
Germany Weighs Soviet Crude Offer ..... Aug 1, 34
Problems Beset "Typical" Gas Pipeline In Soviet Far North ..... June 16H
Russia Weighs Czech Use of Yugoslav Crude Line ..... Jan 16B
Soviet Bloc Progress In Refining/ Petrochemicals ..... Sept 33
Soviet Drilling Costs Up As Technology Lags Behind ..... July 20A
Soviet Lowers Crude Goal ..... Jan 16E

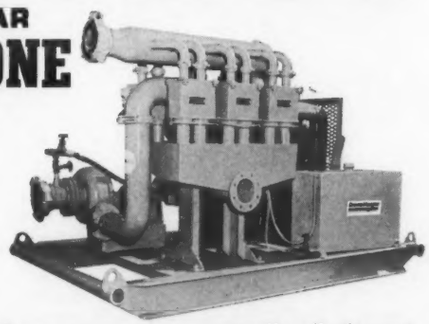
WORLD

Automotive Developments In The Eastern Hemisphere; Jan 16H, Feb 16, Mar 12C, April 16F
Free World Demand Rising 7.3% .. Sept 36
Petroleum In Vienna (Editorial) .. Sept 25
Post Mohole Research Aids Deep Sea Drilling Program ..... June 16E
Potential Gas Supply in USA Estimated At 1,227 Cubic Feet ..... Aug 1, 16
Program Developed For Eighth World Petroleum Congress ..... Sept 54
Schlumberger Transmits Log Via Satellite ..... Feb 15
The World's Pipelines 1969 ..... Apr 58
The World's Petrochemical Plants 1969 ..... Aug 15, 84
The World's Processing Plants 1969 ..... Aug 15, 62
World Rotary Rig Activity: Jan 50, Feb 56, Mar 48, Apr 68
World Crude Oil Production: Jan 50, Feb 56, Mar 48, June 55, July 65, Aug 1, 44, Sept 73, Oct 70, Nov 73, Dec 74

SOLIDS CONTROL

DRESSER MAGCOBAR
TWIN CYCLONE D-SILTER

For maximum silt removal with less mud loss in the underflow



The Dresser Magcobar Twin 4 Swacone removes practically all silt particles larger than 25 microns and more than half the particles as small as 15 microns. Modular design permits any number of Swacones to be manifolded. If there is an appreciable amount of sand with the silt, Dresser Magcobar can install a D-Sander ahead of the desilting unit.

Just one of over 100 hole control products, devices, and services offered by Dresser Magcobar, International Department, P. O. Box 6504, Houston, Texas 77005.

Algiers • Benghazi • Bogota • Buenos Aires • Celle • Dubai • Kuwait • Lagos • Lima • London • Luanda • Maracaibo • Monterrey • Perth • Port Elizabeth • Salvador • San Fernando • Singapore • Sydney • Tananger • Teheran • The Hague • Tripoli • Warri

Dresser Magcobar
DIVISION OF DRESSER INDUSTRIES, INC.

Circle No. **97** *on Reader Service Card*

Atco, Inc. 74
Earle M. Scott & Associates, Inc.

Bechtel Corp. 1
Conley, Baker & Steward
Bomin-Bochumer Mineraloel-gesellschaft mbH & Co. 15
Ellen Preiser
Born Engineering Co. 73
Lowe Runkle Co.
Borsig GmbH 68
Tausch & Ruesse Wirtschaftswerbung

Chicago Bridge, Ltd. 9
Ladd, Wells & Co., Inc.
Chiksan Co. 4
Rives, Dyke & Co., Inc.
Consolidated Pneumatic Tool Co., Ltd. 61
Smee's Advertising, Ltd.
Crane Co. 59
National Export Advertising Service, Inc.
CRC-Crose International, Inc. 74
Charles Ruppman, Advertising

Dresser Magcobar 71, 75, 79
Rives, Dyke & Co., Inc.

Elliott Overseas Corp. 6
N. W. Ayer & Son, Inc.

Farbwerke Hoescst AG/TH 40-41
Delta Werbegesellschaft mbH
Farbwerke Hoeschst AG—Messer Griesheim GmbH 57
Delta Werbegesellschaft mbH
Fenix & Scisson, Inc. 74
Advertising Engineers, Inc.

Gates Rubber Co. 39
Broyles, Allebaugh & Davis, Inc.

ADVERTISERS' INDEX

(Advertising Agencies in Italics)

W. R. Grace & Co., Davison Chemical Div. 32-33
VanSant Dugdale & Co., Inc.

Matthew Hall Engineering Co., Ltd. 29
Taylor Advertising, Ltd.
Halliburton Co. 16
Glenn Advertising, Inc.
Frederic R. Harris, Inc. 80
Hitachi Shipbuilding & Engineering Co., Ltd. 36
Dentsu Advertising, Ltd.
Houdry Process & Chemical Co. 65
Rumrill-Hoyt, Inc.
Hydril Co. 3, 37
Don Brown, Advertising
Hydrocarbon Research, Inc. 5
Persons Advertising, Inc.

Imodco, U.S.A. 45
John Ramsey, Advertising
Industrial Export 69
Publicom
Ingram Contractors ..... Cover III
Ericson, Holder & Associates, Advertising, Inc.

Johns-Manville Corp. 67
Cunningham & Walsh, Inc.

The M. W. Kellogg Co. 14
Fuller & Smith & Ross, Inc.
Kent Instruments, Ltd. 13
Rodway Smith, Ltd.
Ketjen N. V. 50
Raedt en Baet

Mannesmann AG 31
Convest Werbeagentur Lindstrom GmbH
Metal & Pipeline Endurance, Ltd. 27
Stephens Advertising Service, Ltd.
Mission Mfg. Co. 44
Rives, Dyke & Co., Inc.

Nuovo Pignone 46
Societa Pubblicita Nazionale S.p.N.

Petrolite Corp. 11
Batz, Hodgson & Neuwoehner, Inc.
J. F. Pritchard & Co. ..... Cover IV
The Biddle Co.
Procon, Inc., a subsidiary of UOP 47
Campbell-Mithun, Inc.

Rolls Royce, Ltd. 35
Dorland Advertising, Ltd.

Schlumberger Overseas 63
Rives, Dyke & Co., Inc.
Snam Progetti 12
Societa Pubblicita Nazionale S.p.N.
Standard Oil Co. (New Jersey) 55
LaRoche, McCaffrey & McCall, Inc.

Union Carbide Corp. 24-25
Young & Rubicam, Inc.
Uniroyal International ..... Cover II
Ries, Cappiello & Colwell, Inc.
United States Steel International 49
Batten, Barton, Durstine & Osborn, Inc.

Restaurant Voisin 80
Forbes Advertising Co., Inc.

T. D. Williamson, Inc. 53
Ackerman Associates, Inc.
Woodall-Duckham, Ltd. 51
Freeman Advertising

New York's serene gourmet scene

Tired of those noisy, crowded restaurants? Welcome to the Wedgwood elegance of Voisin. Enjoy classic French cuisine, impeccably served . . . at tables set well apart for heavenly privacy. Spacious comfort. Fresh flowers daily. Soft lighting. And everything epicurean . . . from Filet de Boeuf Wellington to delectably light soufflés. Come soon. Your table is waiting.

One of the great restaurants of the world
30 East 65th Street, New York City

Our "400" Room available for private functions.

Circle No. **98** *on Reader Service Card*

HARRIS

FREDERIC R. HARRIS, INC.

ENGINEERING FOR THE PETROLEUM INDUSTRY

• Shipping Terminals • Offshore Terminals
• Storage Facilities • Pipelines • Moorings
• Drilling Platforms

Frederic R. Harris, Inc.
300 East 42nd Street,
New York, New York 10017
Phone: 212 YU 6-2700

Frederic R. Harris (Holland) N.V.
Verhulstplein 17
The Hague, The Netherlands

Adibi-Harris Associates
Avenue Shah Aluminium Building
Box 3394
Tehran, Iran

Frederic R. Harris, Inc.
Apartado del Este 60733
Caracas, D. F., Venezuela

Circle No. **99** *on Reader Service Card*